

**CENTER FOR DRUG EVALUATION AND RESEARCH**

**Application Number** **21-160**

**CHEMISTRY REVIEW(S)**

**DIVISION OF Metabolism and Endocrine DRUG PRODUCTS**  
**Review of Chemistry, Manufacturing, and Controls**

**NDA#: 21-160**

**CHEM.REVIEW #: 2**

**REVIEW DATE: 3-21-01**

<b><u>SUBMISSION TYPE</u></b>	<b><u>DOCUMENT DATE</u></b>	<b><u>CDER DATE</u></b>	<b><u>ASSIGNED DATE</u></b>
Amendment	9-29-00	10-3-00	10-17-00
Amendment	2-13-01	2-14-01	2-21-01
Amendment	3-16-01	3-19-01	3-19-01
Amendment	3-20-01	_____	3-20-01

**NAME & ADDRESS OF APPLICANT:**

Braintree Laboratories, Inc.  
 60 Columbian Street West  
 P.O. Box 850929  
 Braintree, MA 02185-0929

**DRUG PRODUCT NAME:**

Proprietary: PhosLo (Capsules & Gelcaps)

Nonproprietary: Calcium Acetate

Chem. type/Ther. Class: 3S

**PHARMACOL.CATEGORY/INDICATION:**

Treatment of Hyperphosphatemia in end stage renal failure

**DOSAGE FORMS: Capsule & Gelcaps**

**STRENGTHS: 667mg Gelcaps, 333.5 mg Capsules & 667mg Capsules**

**ROUTE OF ADMINISTRATION: Oral**

**DISPENSED:   X   Rx    OTC**

**SPECIAL PRODUCTS:   X   Yes    No**

The capsules and gelcaps are made from gelatin, but the gelatin is in compliance with the FDA (Sept. 1997) Guidance on the Sourcing and Processing of Gelatin. Furthermore, the gelatin in future

**CHEMICAL NAMES, STRUCTURAL FORMULA, MOLECULAR FORMULA, MOL.WT:**

Calcium Acetate  $\text{Ca}(\text{C}_2\text{H}_3\text{O}_2)_2$  Molecular Weight: 158.17

**APPEARS THIS WAY  
ON ORIGINAL**

**SUPPORTING DOCUMENTS:**

Type/Number	Subject	Holder	Status	Review Date
DMF				9-4-99
DMF				2-14-00
DMF				2-14-00
DMF				4-6-99
DMF				8-6-99
DMF				3-10-97
DMF				11-20-99
DMF				8-13-99
DMF				1-6-93
DMF				1-10-95
DMF				3-12-96

**RELATED DOCUMENTS :** NDA 19-976**CONSULTS:** Biopharmaceutics**REMARKS/COMMENTS:**

Since these drug products have the same formulation as the previously approved PhosLo tablets (NDA 19-976), this NDA was originally filed as a supplement to NDA 19-976. However, the supplement was reclassified as NDA 21-160 because PhosLo capsules and gelcaps are considered different dosage forms than tablets. [In this case the term "gelcap" means a compressed caplet within a gelatin capsule].

The responses to the Chemistry deficiencies described in Chemistry Review # 1, and communicated to the applicant in a letter dated 4-4-00 are the subject of Braintree's 9-29-00 amendment. The 2-13-01 amendment corrects a minor error in an acceptance test of a packaging component. Documentation that showed that the gelatin in the capsules and gelcaps is not derived from \_\_\_\_\_ was provided in the 3-16-01 and 3-20-01 amendments. These amendments provide satisfactory responses to the Chemistry deficiencies, and the NDA is now acceptable from a Chemistry point of view. As indicated in Chemistry Review # 1, the cGMP status for this NDA is also acceptable.

**CONCLUSIONS & RECOMMENDATIONS:**

Satisfactory CMC information has been provided, and the application is approvable from a Chemistry point of view.

cc:  
Orig. NDA 21-160  
HFD-510/Division File  
HFD-510/Sheldon Markofsky/(Review Chemist)  
HFD-510/R. Hedin (CSO)  
HFD-510/D-G. Wu (Team Leader)

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Sheldon Markofsky, Review Chemist

R/D Init by: Team Leader

filename: n21160-2b

**APPEARS THIS WAY  
ON ORIGINAL**

THIS SECTION  
WAS  
DETERMINED  
NOT  
TO BE  
RELEASABLE

*9 pages*

**DIVISION OF Metabolism and Endocrine DRUG PRODUCTS**  
**Review of Chemistry, Manufacturing, and Controls**

**NDA#:** 21-160

**CHEM.REVIEW #:** 1

**REVIEW DATE:** 3-23-00

<u>SUBMISSION TYPE</u>	<u>DOCUMENT DATE</u>	<u>CDER DATE</u>	<u>ASSIGNED DATE</u>
NDA (Original)	6-3-99	6-4-99	6-9-99
Amendment	12-22-99	12-27-99	12-29-99
Amendment	1-6-00	1-10-00	1-14-00
Amendment	1-24-00	1-27-00	2-1-00

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DMF				1-6-93
DMF				
DMF				

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The amendment of 12-22-99 provides up-dated establishment information, and the amendment dated 1-6-00 withdraws \_\_\_\_\_ as a testing facility. The amendment, dated 1-24-00, provides LOAs to allow the Agency to examine the DMFs \_\_\_\_\_ used for PhosLo capsules and gelcaps.

**CONCLUSIONS & RECOMMENDATIONS:**

From a Chemistry point of view, this submission is approvable pending satisfactory responses to the chemistry deficiencies. Issue an Approvable Letter. (See Draft List of Deficiencies.)

cc:

Orig. NDA 21-160

HFD-510/Division File

HFD-510/Sheldon Markofsky/(Review Chemist)

HFD-510/R. Hedin (CSO)

HFD-510/D-G. Wu (Team Leader)

  
 Sheldon Markofsky, Review Chemist

3-23-00

R/D Init by: Team Leader

filename: n21160c

3/29/00

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WAS  
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NOT  
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RELEASABLE

*25 pages*